ANACONDA

T. R. Beck
General Manager

April 14, 1976

U. S. Geological Survey
P. O. Box 829
Carlsbad, NM 88220

Attention: Mr. R. S. Fulton, Area Mining Supervisor

Gentlemen:

We are herewith submitting additional information relating to The Anaconda Company proposed "Mining And Reclamation Plan For The P-15, P-17 Uranium Mine" as requested by Mr. Dale Jones in correspondence dated March 30, 1976.

The format of Mr. Jones' letter is indicated for reference with subsequent Anaconda Company response.

1. Would both production shafts be sunk by conventional methods?

   Yes

2. What would be the maximum production rate in TPD of each mine?

   P-15 500 TPD
   P-17 700 TPD

3. How many employees would each mine have at maximum production?

   P-15 125 employees
   P-17 150 employees

4. Where would the water wells that would supply water for the mine facilities be located? What formations would these wells possibly be completed in and what would be the estimated pumping rates (or the daily water requirements in GPD for each mine)?

9393204

#4 Response (con't)

The wells will be located in or near the mine yard area at each shaft location. The wells will be completed either in sandstone units within the Brushy Basin Shale or in the Westwater Canyon Sandstone depending upon the quantity and quality of water from the producing sands. Each mine will require approximately 30 gpm from the wells.

5. Would one of the ventilation shafts at each mine be equipped with a hoist and torpedo-type cage to provide a second independent exit from each mine? What would be the location of such vent holes at each mine and what would the equipment consist of?

Ventilation shaft Number 1 at each mine will be equipped for use as an auxiliary escape way from the mines. A small hoist, headframe and circular cage to fit the inside of the casing will be permanently installed at each of these sites. In addition to the fixed emergency hoisting systems, a mobile crane with sufficient hoisting capacity and cable will be utilized at any ventilation shaft as an emergency hoisting unit.

6. Would all of the ventilation shafts be equipped with surface fans, and if so, what would be their general specifications (motor HP)?

Not all of the ventilation shafts would necessarily be equipped with fans at any given time. This is particularly true during the later years of the mine life. As mining proceeds and the workings are advanced beyond the effective usefulness of the ventilation shafts near the hoisting shaft, they will be abandoned as others are drilled.

Axial flow vane type fans will be utilized on the active ventilation shafts. The horsepower of the required fans will vary between 25 to 100 HP in order to achieve the correct balance and air flow within the mine.

7. Would the settling ponds be lined with any type of impervious material? Would surface runoff from the mine yard, especially from the ore stockpiling area, be routed by a drainage system to the settling ponds?

The settling ponds will be lined with either an impervious clay or plastic liner to prevent seepage.

#7 Response (con't)

The mine yard will be used as a stockpiling area on a small scale in that only one or at the most two days production will be located here at any given time. It is anticipated that the ore will be moved daily to existing stockpile areas approximately one mile east of P-10 mine. The mine yard itself will be surrounded by a berm near the ore handling area so that the runoff can be diverted.

8. What would be done with the particulate sediments in the mine water settling ponds at the end of mining operations?

The particulate sediments will be periodically cleaned out of the mine water settling ponds and transferred to waste or ore stockpiles depending on the grade of the material.

9. What is the current mine water pumping rate for the P-10 Mine?

183 GPM Average for last quarter.

10. Where two or more ore bodies are stacked, what would be the usual sequence of development and stoping of each one?

The usual sequence of mining two or more stacked ore bodies is to develop and stope the upper ore body followed by the same procedure in the lower orebody.

11. What would be the normal sequence of events in the processing of the ore from stockpiling in the mine yard to the final refined product (brief description)?

The ore, upon removal from the mine yard, will be stockpiled at the existing ore stockpile location approved for the P-10 Mining Project with subsequent loading into rail cars for shipment to the Anaconda Bluewater Mill, a distance of approximately fifty miles.

At the mill the ore will be utilized for feed material to the hydrometallurgical milling processes for the recovery and concentration of natural uranium into a precipitated and dried concentrate commonly referred to as "yellowcake" with subsequent sale to a utility company for additional processing and ultimately to be used for generation of electrical power in a nuclear reactor.

12. How many feet of power lines would be required for each mine, and how much surface disturbance would be involved?

Approximately 8,600 feet of surface power lines will be required for P-15 mine, and 10,900 feet for P-17 mine. Virtually no surficial disturbance will occur except for the very small areas required to set the power poles in the ground. Existing roads will be used for access during construction of the lines and the power cables will be pulled through and installed manually.

13. Would the mine yards, sewage lagoons, settling ponds, and the ventilation shaft areas be fenced throughout the lives of the mines?

Yes

14. Taking into account the area's evaporation rates, what rate of mine water inflow would each settling pond be capable of handling?

Based on class A pan evaporation data collected at Laguna, N.M. in 1974, the net evaporation for the area is 60 plus inches annually. Consequently each settling-evaporation pond proposed for the P-15, P-17 projects would be capable of handling approximately 5 gpm constant flow.

At the present time it cannot accurately be predicted how much water will be pumped from the mines, although it is anticipated that the inflow will be quite small. During the development period of the mines, an accurate estimate of the total amount of water encountered will be accomplished. Based on this information, if an additional volume of water is indicated, additional pond area will be constructed to handle the anticipated volume or a pipe line will be constructed to route the mine water to the P-10 holding pond located in the South Paguate pit.

15. Are there any temporary or permanent residences in the mine areas, and if so, how many people reside in them?

There are no residences in either the P-15 or P-17 mine area.

We hope the supplemental information for the P-15, P-17 mining projects contained herein will meet with your approval. If any additional

information or clarification is required, please contact Anaconda at your earliest convenience.

Very truly yours,

T R Beck

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TRB:sr

Enclosure

P-17 AREA - TYPICAL STRATIGRAPHIC SECTION

0-50'	Colluvium, containing blocks of basalt from remnants of Wheat Mountain to the west.
50-520'	Cretaceous, undifferentiated. Marine sandstones grading downward into shales. Sandstone units are capped by a few feet of fairly hard, silica and calcite cemented sandstone.
520-554'	Lower Cretaceous, Basal Dakota sandstone. Its base is a hard, fine-to-medium grained, sugary textured, rounded to sub-rounded sandstone ($\pm$ 10') unit that grades abruptly upward into fairly soft carbonaceous and shaly siltstone. Lies unconformably on the Jurassic sediments.
554-648'	Jurassic, Jackpile sandstone member of Brushy Basin. Locally $\pm$ 95'. Generally gray to buff, medium grained, friable, massive sandstone. Quite kaolinitic, locally contain stringers, blebs and thin beds of gray-green mudstone. Near the base of the section the mudstones are intimately mixed with the sandstone, making selection of the Brushy Basin contact difficult. Mineralization in this area generally in the top third of the unit.
648-	Jurassic, Brushy Basin shale member. Generally near upper contact, calcareous green shales, mudstones and interbedded gray-green limestone, locally with recrystallized calcite.

P-15 AREA - TYPICAL STRATIGRAPHIC SECTION

0-20'	Colluvium, containing slump block basaltic material from remnants of Wheat Mountain to the west.
20-458'	Cretaceous, undifferentiated. Marine sandstones grading downward into shales. Sandstone units are capped by a few feet of fairly hard, silica cemented sandstone.
458-496'	Lower Cretaceous, Basal Dakota sandstone. Its base is a hard, fine-to-medium grained, sugary textured, rounded to sub-rounded sandstone (± 10') that grades abruptly upward into fairly soft carbonaceous and shaly siltstone. Lies unconformably on the Jurassic sediments.
496-600'	Jurassic, Jackpile sandstone member of Brushy Basin. Locally ± 100'. Generally gray to buff, medium grained, friable, massive sandstone. Quite kaolinitic, locally contains stringers, blebs and thin beds of gray-green mudstone. Mineralization in this area generally in the top third of the unit.
600-	Jurassic, Brushy Basin shale member. Generally near upper contact, calcareous green shales, mudstones and interbedded gray-green limestones, locally with recrystallized calcite.